

REMARKS

Upon entry of the present amendment, claims 1-12 will remain pending in the above-identified application and stand ready for further action on the merits.

The amendments made herein to the claims do not incorporate new matter into the application as originally filed, and are simply made based on a request of the Examiner. The amendments do not narrow the scope of the pending claims. Entry of the amendment is respectfully requested.

Petition to Suspend Action

For the Examiner's convenience it is noted that on even date herewith, a petition has been filed under the provisions of 37 CFR § 1.103(a) to request a suspension of action in the matter of the instant application for a period of six (6) months.

Abstract

An amended abstract is provided herein that is less than 150 words in length.

Claim Objection

Claims 1, 2, 4, 5, 11 and 12 have been objected to for containing the term "keeping" therein. The term has been changed to

"kept" as suggested by the Examiner. Withdraw of the claim objection is therefore appropriate at present.

Applicants have amended the claims herein, so that the phrase "wherein drying conditions for the remaining insolubles are keeping at a temperature of 105°C" has been amended to change the word "keeping" to --kept-- as suggested by the Examiner.

**Claim Rejections - 35 U.S.C. §§ 102/103**

Claims 1-8, 10-12 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over **Wilms et al. '693** (US 5,139,693). Further, claims 1-2, 8 and 10-12 have been rejected under 35 U.S.C 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Gangwisch et al. '808** (US 4,406,808). Still further, claims 1-2 and 11-12 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over **Mazzola '751** (US 5,443,751); claims 1-8 and 10-12 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over **Ishikawa et al. '097** (JP 09-013097); claims 1-12 have been rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over **Yamaguchi et al. '970** (WO 97/33970); claims 3-7 and 9 have been rejected under 35 U.S.C. 103(a) as being

unpatentable over *Gangwisch* '808, in view of *Eertink et al.* '454 (US 4,988,454); claims 1-6 and 8-12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over *Grecsek* '778 (US 5,024,778) or *Grecsek* '820 (US 5,080,820). Reconsideration and withdrawal of each of these rejections is respectfully requested based upon the following considerations.

*The Present Invention and Its Advantages*

The present invention relates to detergent particles, which contain therein a based particle capable of releasing a bubble from an inner portion of the detergent particles in the process of dissolving the detergent particle in water. For example, when the detergent particles are contacted with water, pores in the base particles are thermally expanded by hydration heat and dissolution heat due to a reaction between water and a water-soluble salt in the particles. The thermal expansion of the pores by way of the reaction between water and the water-soluble salt, accelerates a self-breakdown of the detergent base particle, such that the inventive detergent exhibits a high-speed dissolubility.

Distinctions over the Cited Art

1. Wilms '863

Wilms '863 may disclose detergent granules as pointed out by the Examiner. However, detergent particles as instantly claimed are not disclosed nor taught in Wilms. Wilms is completely different from the present invention in which a thermal expansion of the pores by way of the reaction between water and the water-soluble salt, accelerates a self-breakdown of the detergent base particle, such that the inventive detergent exhibits a high-speed dissolubility wherein the detergent particles are capable of releasing a bubble having a size of one-tenth or more of a particle size of the detergent particle from an inner portion of the detergent particle in a process of dissolving the detergent particle in water.

Since the above-mentioned properties and characteristics of the instant detergent particles were not heretofore known or achieved in the prior art, it follows that the present inventive detergents possessing such a technical advantage are not anticipated or rendered obvious over Wilms '863. Based on such considerations, it is clear that the disclosure of Wilms '863 is incapable of either anticipating or rendering the present invention obvious.

2. Gangwisch '808

Gangwisch may disclose detergent particulate as pointed out by the Examiner. The use of a water-soluble polymer, however, is not disclosed nor taught in Gangwisch '808. In the present invention an important aspect thereof relates to the use of a water-soluble polymer. Without using a water-soluble polymer, detergent particles having pores of a given size in the inner portion thereof cannot be stable produced. Since the detergent particles of the instant invention contain big pores in the inner portion thereof so as to form bubble-releasing detergent particles (please see pages 12-14), it is important part of the present invention that such pores be stable produced, which is allowed by the presence of the water-soluble polymer in the instant detergent compositions. Accordingly, the present invention is patentably distinguished from the teachings of Gangwisch '808 and is not anticipated or rendered obvious thereby.

3. Mazzola '751

Mazzola '751 discloses a sodium carbonate-based laundry detergent powder that can be utilized in cold-water fabric laundering with a minimized remainder of undissolved detergent residue in the wash water. Such a feature can be achieved in

Mazzola by incorporating a water-soluble fatty acid salt such as sodium stearate as an adherent coating on the detergent granules.

According to the process of Mazzola '751, the builder including sodium carbonate and other main ingredients are dry blended and then agglomerated with water spraying to form agglomerated detergent solids. Thereafter, the agglomerated detergent granules are dry blended with the fine fatty acid salt ingredient to form an adherent coating of fine particles of fatty acid salt on the surfaces of the agglomerated detergent granules (see column 2, line 58 to column 3, line 21). There, the agglomerated detergent granules are mainly composed of sodium carbonate, for example, 81.9% by weight of sodium carbonate being used in Example I. By the above procedure, in the agglomerated detergent granules of Mazzola, the voids between the sodium carbonate particles would be filled with an anionic or nonionic detergent ingredient or water, or other ingredients blended therewith. Also, even if there exists the voids, which are not filled with the ingredients, the air in the voids communicates with an outer space. Therefore, it would be scientifically reasonable to say without experiments that when the agglomerated detergent granules of Mazzola '751 dissolve in water, the granules cannot release a bubble having a size of one-tenth or more of the particle size as taught in the present invention.

Moreover, it is described in Mazzola '751 that:

*"[i]t appears that the fatty acid salt coating on the detergent granules functions as a barrier, and prevents the formation and deposition of calcium carbonate as a coating on detergent granule surfaces. As water molecules penetrate the fatty acid salt coating on the detergent granules, fatty acid calcium salt is formed in the fatty acid coating, and softened water passes through the fatty acid salt coating and dissolves the core sodium carbonate of the detergent granules (column 3, line 49-58)."*

Therefore, Mazzola '751 completely teaches away from the technical idea of releasing bubbles from an inner portion in the present invention.

In conclusion, the present invention is completely distinguishable from Mazzola in that the agglomerated detergent granules of Mazzola cannot release bubbles as defined in the present invention. One of ordinary skill in the art would not arrive at the present invention simply by following the teachings of Mazzola '751.

Based on such considerations, the outstanding rejection under 35 U.S.C. § 102(b)/35 U.S.C. § 103(a) over Mazzola '751 must be withdrawn.

4. Ishikawa '097

One of the best features of Ishikawa '097 resides in that a high bulk density bleaching detergent is manufactured under the

presence of a bleaching activator granulation product formed by granulating a bleaching activator by bonding with an organic binder in the pulverization of a high bulk density detergent kneading product containing a surfactant.

The process of Ishikawa '097 comprises the steps of (a) kneading a surfactant, a builder and other ingredients to give a detergent kneading product; (b) separately mixing an organic binder with a bleaching activator to give a noodle-like granulated product (bleaching activator granulation product); and (c) pulverizing the detergent kneading product under the presence of the bleaching activator granulation product, to give a bleaching detergent granulation product.

It is described in Ishikawa '097 that the step (a) is carried out with a kneader (see [0004]); the step (b) is carried out with a kneading extruder (see [0009]); and the step (c) is carried out with a pulverizing granulator (see [0011]). These steps provide compacted products. For example, it is described in [0018] that a compact kneading product is obtained. Therefore, it would be scientifically reasonable to say without experiments that the resulting detergent granulation product would not have any pores, which can release a bubble from the detergent granulation product. Moreover, since the detergent granule of Ishikawa '097 is obtained by pulverizing the compact kneading product, the ingredients in the



granule would be present homogeneously. Therefore, the detergent granulation product cannot take a localized structure in which larger portions of the water-soluble polymer and the water-soluble salt are present near the surface of the product as taught in the present invention.

In conclusion, the present invention is completely distinguishable from Ishikawa '097 in that the product cannot release bubbles and does not have a localized structure. One of ordinary skill in the art would not readily arrive at the teaching of the present invention simply from the teachings of Ishikawa.

Based on such considerations, it is submitted that the outstanding rejection of claims 1-8 and 10-12 under 35 U.S.C. 102(b) or 35 U.S.C. § 103(a) over Ishikawa et al. '097 must be withdrawn.

5. Eertink '454

Eertink '454 uses polymers as a structurant. By contrast the present invention uses a polymer in order to prepare detergent particles having relatively large pores in the inner portion thereof so that a self-breakdown of the particle can be accelerated, and thereby the detergent particles exhibit a high-speed dissolubility. Therefore, the object and effect of the polymer used in the present invention are different from those of

Eertink '454, and more importantly, the effect produced by using a water-soluble polymer in the present invention is not rendered obvious by the disclosure of Eertink '454. In this regard, the cited Eertink reference provides no motivation to arrive at a detergent composition or detergent particles as instantly claimed, which possessed an unexpected advantageous high-speed dissolubility.

6. Remaining References

Regarding the remaining cited art of Yamaguchi et al. '970, Grecsek '778 and Grecsek '820, their disclosures are also incapable of rendering the present invention unpatentable, under either 35 U.S.C. § 102(e), or 35 U.S.C. § 103(a), since they provide no teachings or motivation to those of ordinary skill in the art that would allow those of ordinary skill in the art to arrive at the instant invention as claimed, and particularly would not allow them to arrive at the following aspect of the instant invention:

*"...wherein the detergent particles comprise a detergent particle being capable of releasing a bubble from an inner portion of the detergent particle in a process of dissolving the detergent particle in water, the bubble having a size of one-tenth or more of a particle size of the detergent particle...." (see claim 1)*

Moreover, such properties are not inherent in any of the applied cited art.

7. Comments Concerning Inherency

Accidental, unappreciated results should not be regarded as anticipatory. *Mycogen Plant Sci. Inc. v. Monsanto Co.*, 243 F.3d 1316, 58 USPQ2d 1030 (Fed. Cir. 2001). An accidental or unwitting duplication of an invention cannot constitute an anticipation. *Scaltech Inc. v. Retec/Tetra L.L.C.*, 156 F.3d 1037, 48 USPQ2d 1037 (Fed. Cir. 1998). To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). (See also *Transclean Corp. v. Bridgewood Serv. Inc.*, 290 F.3d 1346, 62 USPQ2d 1865, 1871 (Fed. Cir. 2002).

Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art. However, the discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. Insufficient prior understanding of the inherent properties of a known composition does not defeat a finding of anticipation. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 51 USPQ2d 1943 (Fed. Cir. 1999).

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Scaltech Inc. v. Retec/Tetra L.L.C.*, 156 F.3d 1193, 51 USPQ2d 1055 (Fed. Cir. 1999); *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). Inherency does not embrace probabilities or possibilities. *Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 296 F.3d 778, 63 USPQ2d 1597 (Fed. Cir. 2002). Occasional results are not inherent. *Mehl/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1365, 52 USPQ2d 1303, 1306 (Fed. Cir. 1999). The courts may be of the view that there is inherency only if a prior art example always yields the claimed invention. See *Glaxo, Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 34 USPQ2d 1565 (Fed. Cir. 1995).

#### **Double Patenting Rejections**

Claims 1-12 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of US 6,376,453, and have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending application number 09/594,025.

Applicant's respectfully request that the Examiner hold these two separate obviousness-type double patenting rejections in

abeyance until allowable subject matter is otherwise indicated, or alternatively, until applicants have a chance to better determine if suitable comparative testing can be carried out with the closest prior art reference(s) of record, showing that (i) the detergent particles of the cited art do not possess the structural features of the detergent particles of the instant invention and/or showing that (ii) such detergent particles of the cited art are unable to meet the physical characteristics of the detergent particles of the instant invention; and thereby rendering the outstanding rejections under 35 USC §§ 102/103 moot.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a notice of allowance clearly indicating that each of the pending claims 1-12 is allowed and patentable under the provision of title 35 under the United States code.

Pursuant to 37 C.F.R. 1.17 and 1.136(a), the Applicants respectfully petitions for a three (3) month(s) extension of time for filing a response in connection with the present application, and the required fee of \$950.00 is attached hereto.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully

Appl. No. 10/062,487

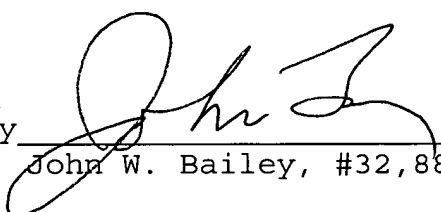
requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

  
John W. Bailey, #32,881

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

JWB/enm  
1422-0516P